



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

US Ply, Inc.
2000 E. Richmond Ave.
Fort Worth, TX 76104

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: US Ply APP Modified Bitumen Roofing Systems Over Concrete Decks

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of pages 1 through 49.
The submitted documentation was reviewed by Alex Tigera.



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 1 of 49

ROOFING ASSEMBLY NOTICE OF ACCEPTANCE

Category: Roofing
Sub-Category: Modified Bitumen
Material: APP
Deck Type: Concrete
Maximum Design Pressure: -630 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
USP Base Sheet	36" x 108'	ASTM D 4601	An asphaltic, fiberglass reinforced base sheet
USP NVB	36" x 36'	ASTM D 4897 Type II	Fiberglass reinforced venting base sheet.
USP Type IV	36" X 180'	ASTM D 2178	An asphaltic, fiberglass reinforced, ASTM D2178 Type IV ply sheet.
USP Type VI	36" X 180'	ASTM D 2178	An asphaltic, fiberglass reinforced, ASTM D2178 Type VI ply sheet.
USP APP 160S	39-3/8" X 32' 9"	ASTM D 6222 Type I, Grade S	Polyester reinforced, smooth surfaced, APP modified bitumen base / interply sheet.
USP APP 160S Plus	39-3/8" X 32' 9"	ASTM D 6222 Type I, Grade S	Torch applied, smooth surfaced, polyester reinforced, APP modified bitumen membrane
USP APP 160M	39-3/8" X 32' 9"	ASTM D 6222 Type I, Grade M	Polyester reinforced, mineral granule surfaced, APP modified bitumen cap sheet.
SafeWeld 180S APP	39-3/8 x 32' 9"	ASTM D 6222 Type I, Grade S	Smooth surfaced, polyester reinforced APP modified bitumen membrane with talc underside.
SafeWeld 180M APP	39-3/8 X 32' 9"	ASTM D 6222 Type I, Grade G	Smooth surfaced, polyester reinforced APP modified bitumen membrane with slag underside.
SafeWeld 180FR APP	39-3/8" x 32' 9"	ASTM D 6222 Type I, Grade G	Granule surfaced, polyester reinforced, fire resistant, APP modified bitumen membrane with slag underside.
DuraWeld 4S APP	39-3/8" x 32' 9"	ASTM D 6222 Type I, Grade S	Smooth surfaced, polyester reinforced, APP modified bitumen base / interplay sheet.
DuraWeld 5S APP	39-3/8" x 32' 9"	ASTM D 6222 Type I, Grade S	Smooth surfaced, polyester reinforced, APP modified bitumen base / interplay sheet.
DuraWeld 4M APP	39-3/8" x 32' 9"	ASTM D 6222 Type I, Grade G	Polyester reinforced, granule surfaced APP modified bitumen cap sheet.
DuraWeld 4M FR APP	39-3/8" X 32' 9"	ASTM D 6222 Type I, Grade G	Polyester reinforced, mineral granule surfaced, fire resistant, APP modified bitumen cap sheet.

SafeWeld APP Modified Bitumen Adhesive	5 gal. or 350 gal.	ASTM D 3019	An asphalt based polymer modified adhesive.
USP #442 Fibered Aluminum Roof Coating	5 gal	ASTM D 2824 Type III	A hydrocarbon protective coating.

APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
ACFoam-II, ACFoam-III	Polyisocyanurate Insulation	Atlas Roofing Corporation
ACFoam IV, Tapered ACFoam	Polyisocyanurate insulation with a coated glass mat.	Atlas Roofing Corporation
ENRGY 3, JM ISO 3	Polyisocyanurate Insulation	Johns Manville Corporation
FescoBoard	Rigid perlite roof insulation board	Johns Manville Corporation
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Building Products Company, LLC.
H-Shield, Tapered H-Shield, H-Shield-CG, H-Shield WF	Polyisocyanurate foam insulation	Hunter Panels, LLC.
Multi-Max-3, Multi-Max FA-3	Polyisocyanurate Insulation	Rmax Operating, Inc.
Tapered Therमारoof-3	Polyisocyanurate insulation	Rmax Operating, Inc.
DensDeck, DensDeck Prime, DensDeck DuraGuard Overlayment Board Overlayment Board	Water resistant gypsum board	Georgia-Pacific Gypsum LLC.
SECUROCK Gypsum-Fiber Roof Board	Gypsum board	United States Gypsum Corporation
High Density Wood Fiberboard	Wood fiber board	Generic
Approved XPS	Closed-cell, extruded polystyrene board	Generic
Structodek High Density Fiberboard Roof Insulation Roof Insulation	High Density Wood Fiber insulation board.	Blue Ridge Fiberboard, Inc.
InsulFoam EPS	Closed-cell, expanded polystyrene board.	Insulfoam LLC.



EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Trinity ERD	U41790.05.12-1-R1	ASTM D 6222	01/21/13
	U41790.05.12-2-R2	ASTM D 6222	02/11/13
	GAPR-004-02-01	ASTM D 4897	05/19/11
PRI Construction Materials Technologies Factory Mutual Research Corp.	3033028	FM 4470	03/23/2009
	2D5A9.AM	FM 4450	06/22/1999
	3014751	FM 4450	08/27/2003
	3014692	FM 4470	08/05/2003
	3020703	FM 4470	07/30/2004
	3012321	FM 4470	07/29/2002
	3032172	FM 4470	06/12/2009
	3009610	FM 4450	10/15/2001
	3024311	FM 4470	11/01/2006
	3008869	FM 4470	03/19/2001
	3024973	FM 4470	11/10/2006
	3023458	FM 4450	07/18/2006

APPROVED ASSEMBLIES

Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(1): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum 1.5" thick	N/A	N/A
ACFoam-II, ENRGY 3, ISO 95+ GL, Multi-Max-3 (tapered or flat) Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in with Insta-Stik Quik Set Insulation Adhesive applied in ¾" to 1" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -67.5 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 5 of 49

Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(2): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum 1.5" thick	N/A	N/A
ACFoam-II, ENRGY 3, ISO 95+ GL, Multi-Max-3 (tapered or flat) Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Minimum 1/4" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in with Insta-Stik Quik Set Insulation Adhesive applied in 3/4" to 1" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -67.5 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 6 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(3): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITESET Roofing Adhesive applied in 3" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -87.5 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
 Page 7 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(4): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum 1.5" thick	N/A	N/A
ACFoam-II, ENRGY 3 (tapered or flat) Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in with Insta-Stik Quik Set Insulation Adhesive applied in ¾" to 1" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -112.5 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
 Page 8 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(5): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Insulfoam EPS Minimum 2.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum ¼" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in with OMG OlyBond 500 Adhesive Fastener applied in ¾" to 1" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet, fully adhered with hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -120.0 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(6): One or more layers of insulation adhered with approved asphalt.

All General and System limitations apply.

Vapor Barrier: (Optional) Asphaltic vapor retarder.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, H-Shield, ENRGY 3, Multi-Max 3, ISO 95+ GL Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in a full mopping of approved asphalt at a rate of 20-40 lbs/sq or with Millennium One Step Foamable Adhesive or Millennium PG-1 Pump Grade Adhesive applied in ½" to ¾" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet is fully adhered with hot asphalt.

Ply Sheet: (Optional) One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -127.5 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(7): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

Vapor Barrier: (Optional) Asphaltic vapor retarder.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, ENRGY 3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with Millennium Pourable Foam Adhesive applied in ½" to ¾" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet is fully adhered with hot asphalt.

Ply Sheet: (Optional) One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -127.5 psf. (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(8): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum ¾" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A
Fesco Board Minimum 1.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSEET Roofing Adhesive applied in 1.5" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -135.0 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(9): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, ENRGY 3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Minimum ¼" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with Millennium Pourable Foam Adhesive applied in ½" to ¾" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet is fully adhered with hot asphalt.
Or
One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -135.0 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 13 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(10): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer (Optional)</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, H-Shield, ISO 95+ GL or ENRGY 3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in with OlyBond 500 Adhesive Fastener applied in 3/4" to 1" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -127.5 psf with ENRGY 3 (See General Limitation #9.)
-150.0 psf with all other base insulations listed (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(11): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with Millennium Pourable Foam Adhesive applied in ½" to ¾" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -150.0 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(12): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

Vapor Barrier: Asphaltic vapor retarder

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, H-Shield, ENRGY 3, ISO 95+ GL Minimum 1.0" thick	N/A	N/A
DensDeck Minimum 1/4" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in with OlyBond Adhesive applied at a rate of 1 gal/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -150.0 psf (See General Limitation #9)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(13): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in with Insta-Stik Quik Set Insulation Adhesive applied in ¾" to 1" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -157.5 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(14): One or more layers of insulation adhered with approved adhesives.

All General and System limitations apply.

Vapor Barrier: (Optional) Asphaltic vapor retarder.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, ENRGY-3, H-Shield or Multi-Max 3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in with Millennium One Step Foamable Adhesive applied in 1/2" to 3/4" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -157.5 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
 Page 18 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(15): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
H-Shield, ACFoam-II, ACFoam-III, ISO 95+GL, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck DuraGuard Overlayment Board, DensDeck Prime Minimum ¼" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck in with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITESET Roofing Adhesive applied in 3" to 3½" ribbons spaced 12 in. o.c. Top insulation shall be adhered with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITESET Roofing Adhesive ribbons, perpendicular to those used to apply base insulation. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet, SafeWeld 180S APP is fully adhered with Safeweld APP Modified Adhesive at 1.5 gal/sq or heat welded.

Membrane: One ply of Safeweld 180 M APP or SafeWeld 180 FR APP adhered with Safeweld APP Modified Adhesive at 1.5 gal/sq or heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -162.5 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(16): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam IV Minimum 2.0” thick	N/A	N/A
Ultra-Max, Multi-Max FA-3, Minimum 1.5” thick	N/A	N/A
ACFoam-III Minimum 1.3” thick	N/A	N/A
ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3, JM ISO 3 Minimum 1.0” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Prime, DensDeck DuraGuard Overlayment Board Minimum ¼” thick	N/A	N/A

Note: All insulation shall be adhered to the deck with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSEET Roofing Adhesive applied in 1.5” wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of SafeWeld 180S APP or USP Base Sheet adhered with SafeWeld APP Modified Bitumen Adhesive applied at 1.5 – 2.0 gal/sq (0.6 – 0.8 l/m²) or heat welded.

Membrane: One ply of SafeWeld 180M APP or SafeWeld 180FR APP adhered with SafeWeld APP Modified Bitumen Adhesive applied at 1.5 – 2.0 gal/sq (0.6 – 0.8 l/m²) or heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -162.5 psf (See General Limitation #9)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 20 of 49

Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(17): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

Vapor Barrier: (Optional) Torch-applied barrier.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, ACFoam-III, ISO 95+ GL, H-Shield, Tapered H-Shield, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A
Structodek High Density Fiberboard Roof Insulation Minimum 1/2" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSEET Roofing Adhesive applied in 3" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -117.5 psf; without vapor barrier (See General Limitation #9.)
-169.0 psf; with vapor barrier (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(18): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck with 3M CR-20 Roofing Adhesive or TITSEET Roofing Adhesive applied in 3" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -180.0 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 22 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(19): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam IV Minimum 2.0" thick	N/A	N/A
Multi-Max FA-3, Minimum 1.5" thick	N/A	N/A
ACFoam-III Minimum 1.3" thick	N/A	N/A
ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3, JM ISO 3 Minimum 1.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A
Fesco Board Minimum 1.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSESET Roofing Adhesive applied in 1.5" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -180.0 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 23 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(20): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

Vapor Barrier: (Optional) Asphaltic vapor retarder.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, H-Shield, ENRGY 3, Multi-Max-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with Millennium PG-1 Pump Grade Adhesive applied in ½" to ¾" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -180.0 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(21): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with OMG OlyBond 500 Adhesive Fastener applied in ¾" to 1" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet is fully adhered with hot asphalt.

Ply Sheet: (Optional) One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -187.5 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(22): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

Vapor Barrier: (Optional) One ply of approved, hot-applied, sheet.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, ACFoam-III, ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSEET Roofing Adhesive applied in 3" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -187.5 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(23): One or more layers of insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt at a rate of 20-40 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -187.5 psf; (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(24): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in with Millennium Pourable Foam Adhesive applied in 1/2" to 3/4" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -202.5 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(25): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, H-Shield, ENRGY 3 Minimum 2" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with hot asphalt in full coverage at 25 lb/sq or with Insta-Stick Insulation Adhesive, OMG OlyBond 500 Adhesive Fastener, 3M CR-20 Polyurethane Foam Insulation Adhesive, TITESET Roofing Adhesive or Millennium One-Step Foamable Adhesive applied in 3/4" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -225.0 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(26): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL Minimum 2" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with hot asphalt in full coverage at 25 lb/sq or with Insta-Stick Insulation Adhesive or Millennium One-Step Foamable Adhesive applied in 3/4" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -225.0 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 30 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(27): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Fesco Board Minimum ¾" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in with OlyBond 500 Adhesive Fastener applied in ¾" to 1" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet is fully adhered with hot asphalt.

Ply Sheet: (Optional) One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -232.5 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(28): One or more layers of insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Fesco Board Minimum 3/4" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt at a rate of 20-40 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP Base Sheet fully adhered in hot asphalt.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -232.5 psf; (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(29): One or more layers of insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, H-Shield, ENRGY 3, Multi-Max-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Minimum ¼" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in a full mopping of approved asphalt at a rate of 20-40 lbs/sq or with Millennium One Step Foamable Adhesive or Millennium PG-1 Pump Grade Adhesive applied in ½" to ¾" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -232.5 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(30): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSEET Roofing Adhesive applied in 3" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -240.0 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(31): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam IV Minimum 2.0" thick	N/A	N/A
Multi-Max FA-3, Minimum 1.5" thick	N/A	N/A
ACFoam-III Minimum 1.3" thick	N/A	N/A
ISO 95+ GL, H-Shield, H-Shield CG, ENRGY 3, JM ISO 3 Minimum 1.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSEET Roofing Adhesive applied in 1.5" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -240.0 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 35 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(32): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, H-Shield, ENRGY 3, ISO 95+ GL Minimum 1.0" thick	N/A	N/A
DensDeck, Minimum ¼" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Minimum ¼" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with OlyBond Adhesive applied at a rate of 1 gal/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -255.0 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 36 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(33): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
InsulFoam EPS Minimum 3/4" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSEET Roofing Adhesive applied in 1.5" wide ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -255.0 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(34): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

Vapor Barrier: (Optional) One ply of approved, hot-applied, sheet.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, ACFoam-III, ISO 95+ GL, H-Shield, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in with 3M CR-20 Polyurethane Foam Adhesive or TITSEET Roofing Adhesive applied in 3" to 3½" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -270.0 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
 Page 38 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(35): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, H-Shield, ENRGY 3, Multi-Max-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Minimum ¼" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in with Millennium PG-1 Pump Grade Adhesive applied in ½" to ¾" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -270.0 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(36): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Any Approved XPS Minimum 1.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in with OlyBond 500 Adhesive Fastener applied in 3/4" to 1" ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 5S APP or DuraWeld 4S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S or DuraWeld 4S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -277.5 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
 Page 40 of 49

Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(37): One or more layers of insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, ACFoam-III, ISO 95+ GL, Multi-Max FA-3, JM ISO 3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSEET Roofing Adhesive spray applied in 3 to 3½" in. ribbons spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 4S APP or DuraWeld 5S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 4S APP or DuraWeld 5S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -302.5 psf (See General Limitation #9.)



Membrane Type: APP
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(38): One or more layers of insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in full mopping of approved asphalt at a rate of 20-40 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 4S APP or DuraWeld 5S APP, heat welded.

Ply Sheet: (Optional) One or more layers of USP APP 160S, USP APP 160S Plus, SafeWeld 180S APP, DuraWeld 4S APP or DuraWeld 5S APP, heat welded.

Membrane: One ply of USP APP 160M, SafeWeld 180M APP, SafeWeld 180FR APP, DuraWeld 4M APP or DuraWeld 4M FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -302.5 psf (See General Limitation #9.)



Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(39): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Tapered Thermarroof-3 or Multi-Max FA-3 Minimum 2.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in a full mopping of approved asphalt at a rate of 20-40 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of USP Base Sheet fully adhered in hot asphalt. Or One ply of DuraWeld 4S APP, DuraWeld 5S APP, SafeWeld 180S, USP APP 160S, USP APP 160S Plus or heat welded.
Membrane:	One ply of USP APP 160M, DuraWeld 4M APP, DuraWeld 4MFR APP, SafeWeld 180M APP, SafeWeld 180FR APP, heat welded.
Surfacing:	For use on non FR membranes: USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.
Maximum Design Pressure:	-397.5 psf (See General Limitation #9.)



Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(40): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam IV, ACFoam Tapered Minimum 2.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to the application of insulation. All insulation shall be adhered to the deck in a full mopping of approved asphalt at a rate of 20-40 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of USP Base Sheet fully adhered in hot asphalt. Or One ply of DuraWeld 4S APP, DuraWeld 5S APP, SafeWeld 180S, USP APP 160S, USP APP 160S Plus or heat welded.
Membrane:	One ply of USP APP 160M, DuraWeld 4M APP, DuraWeld 4MFR APP, SafeWeld 180M APP, SafeWeld 180FR APP, heat welded.
Surfacing:	For use on non FR membranes: USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.
Maximum Design Pressure:	-487.5 psf (See General Limitation #9.)



Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(41): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ACFoam IV, Tapered ACFoam Minimum 2.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSETE Roofing Adhesive applied in 3 to 3½" in. ribbons spaced 6 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of DuraWeld 4S APP, DuraWeld 5S APP, SafeWeld 180S, USP APP 160S, USP APP 160S Plus or heat welded.

Membrane: One ply of USP APP 160M, DuraWeld 4M APP, DuraWeld 4MFR APP, SafeWeld 180M APP, SafeWeld 180FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -580.0 psf (See General Limitation #9.)



Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(42): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Tapered Thermarroof-3 or Multi-Max FA-3 Minimum 2.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with 3M CR-20 Polyurethane Foam Insulation Adhesive or TITSETE Roofing Adhesive applied in 3 to 3½" in. ribbons spaced 6 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of DuraWeld 4S APP, DuraWeld 5S APP, SafeWeld 180S, USP APP 160S, USP APP 160S Plus or heat welded.

Membrane: One ply of USP APP 160M, DuraWeld 4M APP, DuraWeld 4MFR APP, SafeWeld 180M APP, SafeWeld 180FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -625.0 psf (See General Limitation #9.)



Membrane Type: APP

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(43): One or more layers of insulation adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Tapered Thermarroof-3 or Multi-Max FA-3 Minimum 2.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with OlyBond 500 applied in 3/4" to 1" in. ribbons spaced 6 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of DuraWeld 4S APP, DuraWeld 5S APP, SafeWeld 180S, USP APP 160S, USP APP 160S Plus or heat welded.

Membrane: One ply of USP APP 160M, DuraWeld 4M APP, DuraWeld 4MFR APP, SafeWeld 180M APP, SafeWeld 180FR APP, heat welded.

Surfacing: For use on non FR membranes:
USP #442 Fibered Aluminum Roof Coating applied at a rate of 1.5 gal/sq.

Maximum Design Pressure: -630.0 psf (See General Limitation #9.)



NOA No.: 10-1123.04
Expiration Date: 03/21/18
Approval Date: 03/21/13
Page 47 of 49

Membrane Type: APP
Deck Type 3: Concrete Decks, Non-Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(1): Base sheet adhered to primed substrate.

All General and System limitations apply.

Primer: Deck shall be primed with ASTM D41 applied at a rate of 0.75 gal/sq.

Base Sheet: (Optional) One ply of DuraWeld 4S APP, USP APP 160S, USP APP 160S Plus, DuraWeld 5S APP, SafeWeld 180S APP heat welded with 3 in. side laps and 6 in. end laps.

Membrane: One ply of DuraWeld 4M APP, DuraWeld 4M FR APP, USP APP 160M, SafeWeld 180M APP or SafeWeld 180FR APP torch adhered with 3 in. side laps and 6 in. end laps.

Surfacing: Install the following for all non FR systems.

1. USP #442 Aluminum Fibered Roof Coating applied at a rate of 1.5 gal/sq (0.6 l/m²)

Maximum Design Pressure: -495.0 (See General Limitation #9.)



CONCRETE DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117; calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.

Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.

5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**

END OF THIS ACCEPTANCE